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NOW that the holidays are over and all have enjoyed the sight of home faces, and the cheer of home tables and firesides, we draw a long breath as we daily tuck our note-books in our pockets and go to the familiar College lecture room.

We think of the three months that have passed, and review in our minds what we have seen and heard there, and what we have learned.

Some of us for the first time have heard the principles and laws of Homœopathy laid down by our learned Dean, and have almost held our breath in wonderment as a patient recited the story of his relief from sickness by the prescription we heard given him at a previous meeting. How a man having suffered for years with that most intractable of diseases, Intermittent Fever, has by the administration of two or three doses of Cedron come back in a week perfectly well. Such examples of what this royal law of similars can and will do in the hands of those who give

it conscientious study, has stimulated us to study and work, that we might emulate the example of one whom we revere as a teacher and honor as a physician, and tell ourselves to "go and do likewise."

And we have listened to the development of the "potential human being," and it has grown, during these three months, to sufficient size to be passed through the pelvis in all the ways that can be imagined by the fertile mind of man. Descent, flexion, rotation and external restitution, have rung in our ears until they haunt us as the "Punch, brothers, punch—punch with care; punch in the presence of the passenaire," rang in the ears of the inoffensive traveler. But we know them, and in our memories they will stick.

The earnest manner and realistic language in which we have heard the eye talked of has removed from the minds of all, the suspicion that the study of Ophthalmology was a bugbear. Instead, it has become a lecture we all look forward to with feelings of pleasurable anticipation. We know that it will be a pleasure to all the students to hear these lectures continued for the rest of the session.

As we "skin" along we absorb many things that will serve us in our future life. We all have in many places in our note-books the formula for the "Liquor picis alkalinis" with which to rub down the itching hides of future generations.

Then, "as one thing brings up another," we recall how those who talk about ears insist on getting an answer on the subject they are quizzing on, and will not be put off. How a "train of thought" seemed very much like a string, at one end of which was a student, and at the other an inquisitive professor with a desire to approximate the thickness of our skulls.

We know, too, that three months ago the wicked shake of a forefinger about three inches

from our nose, would shake out of our heads every idea of surgery that we had so diligently crammed in the night before. But now—well—we know how to spell Heys, anyway, and some of us know the coverings of a Hernia, if we don't know what the "Cutis Anserina" is.

On Fridays, unlucky days! how doth the busy student pore over a little note-book during lunch hour to learn the many, many ills that may lurk in a bean-shaped organ. Or perhaps to bewail the lack of knowledge of the chemical tests. Or he may shake in mortal fear that his note-book, text-book or any other book will avail him nought, for the-man-who-always-lectures-to-one-side-of-the-room may presume on his "general knowledge" for a familiarity with the technique of that branch.

One thing we trust we have heard the last of, that is, the doubtful anecdotes that some consider necessary to the education of the Medical Student. The day has passed, gentlemen, when such things are counted as part of the course, gone as surely as is the swaggering, swearing surgeon of the last century. The Medical Student to-day is a man of education and refinement, and knows the touch of pitch defiles, and does *not* believe that he can sit and listen to smutty tales without his moral better-self being the worse off from such influence. The lightest breath of air that blows, moves the leaves, if not the branches of the mightiest giant of the forest; so the lightest word that is spoken has its influence on our character, whether we be conscious of it or not.

Such things offend the ear and degrade the mind, and our College amphitheatres should never be their abode.

FROM reading the medical journals of the opposite school, one not used to the fitful nature of their fancies might suppose that they had found in antipyrine a cure infallible and for all the ills the human flesh is heir to. Their joy is almost as great as when they have tried an old homœopathic remedy and seen the magical effect produced. But alas! in a few months it will be relegated to that vast repository wherein they keep their mistakes, to be resurrected some

fifty or a hundred years hence. Better stick to quinine and morphia, as long as you are too stiffnecked to buy a homœopathic text-book.

Diagnostic Features of the Different Presentations of the Fœtus.

FROM A LECTURE BY PROF. L. L. DANFORTH.

IN determining the different presentations of the fœtus, the physician may employ three different kinds of examination, viz.: palpation, auscultation and the vaginal touch.

I. DIAGNOSIS OF VERTEX PRESENTATIONS.

By external palpation the experienced diagnostician will readily detect the hard, rounded and smooth head in the hypogastric region. Above this may be recognized the entire dorsal region of the child. Near the end of pregnancy, especially in primiparæ, the head may have descended into the cavity of the pelvis, and hence a superficial examination in the hypogastric region would fail to detect it. In such cases, if the ends of the fingers be placed above the pubis, and firm pressure be made downwards, the head of the child will soon be felt.

Examination by palpation is of great value, but may be impracticable in some cases, owing to extreme thickness of the abdominal walls, or to the contractions of the uterus which it excites.

By auscultation much knowledge may be gained both of the presentation and the position of the child's head. In presentations of the cephalic extremity, the maximum intensity of the pulsations of the heart is found below a horizontal line passing through the umbilicus. Auscultation also determines the position of the child. In the fœtus the lungs are flattened against the vertebral column, and the sound of the heart is transmitted through the dorsal region, whose curvature is applied against the walls of the uterus. As the spinal column and the occiput are both directed towards the same side, the location of the heart sound determines the position of the occiput. In the left occipito-anterior position, the heart beats are heard most

strongly in front and to the left, while in the right occipito-posterior, the heart beats are heard behind and to the right.

By the vaginal touch, we may determine the existence of a vertex presentation before the onset of labor; the vertex is felt as a hard, round, smooth mass, completely filling the inferior segment. The sutures and fontanelles may be made out before the rupture of the membranes, but much more distinctly after that event. If the os uteri is only slightly dilated, we feel the sagittal suture only. If the suture has an oblique direction, running from before backwards, and from the left towards the right, the position must be either the first or third. If it run in the other diameter of the pelvis, the position is either second or fourth. The location of the fontanelle will serve to determine the exact position. The two fontanelles, anterior and posterior, are about equidistant from the centre of the os.

The anterior fontanelle is of large size, lozenge-shaped, and has four sutures running into it at right angles. The posterior fontanelle of small size, triangular in shape, and has but three sutures, the sagittal and the two divisions of the lambdoidal suture. During labor through the overlapping of the bones, the posterior fontanelle may be well nigh obliterated.

II. DIAGNOSIS OF FACE PRESENTATIONS.

Palpation is of little value in the diagnosis of face presentations. We may, indeed, determine that the cephalic extremity of the child is in the inferior segment of the uterus, but how can we determine whether it is flexed or extended?

Auscultation, likewise, possesses little diagnostic value in face presentations. The foetal heart is heard on the side on which the limbs are.

By the touch only can the diagnosis be established.

Before the membranes are ruptured, the head is high and difficult of access, thus differing from a vertex presentation.

After recent rupture of the membranes, we find the irregularities of the face in contra-distinction to the round, smooth vertex.

The forehead may be felt traversed by a suture—then the nares beyond this. The mouth bounded by the superior and inferior maxillary arches. The eyes may also be felt as two little soft tumors surrounded by osseous circles. Examinations should not be too frequent or too forcible, for fear of injuring the eyes. The direction of the opening of the nostrils must correspond with the direction of the chin, and hence determines the position. Presentations of the face are most likely to be mistaken for presentations of the breech. When a long time has elapsed after the rupture of the membranes, the face becomes the seat of a considerable tumefaction. The cheeks, being swollen and compressed on the sides, project and lie closely to each other in front, thus leaving a deep fissure between them, in which the distinctive features of the face are entirely concealed. This fissure might be readily mistaken for the fissure between the nates, which would be confounded with the swollen cheeks. The lips are also swollen, and everted, so as to offer a rounded orifice instead of a transverse fissure, and may be mistaken for the anus.

III. DIAGNOSIS OF BROW PRESENTATIONS.

The diagnosis is made through the vaginal touch only. The apex of the forehead will be recognized in the pelvic canal, with the eyes and the root of the nose on one side, and the large anterior fontanelle and parietal bones on the other.

IV. DIAGNOSIS OF BREECH PRESENTATIONS.

Palpation will enable us to feel the head at the fundus uteri. Auscultation may also enable us to detect breech presentations. The fetal heart sounds will be heard higher than in head presentations, and the side of the abdomen at which it is perceived will determine the position of the back.

Upon vaginal examination the presenting part is usually high up, and the inferior segment of the uterus is not well filled out. The bag of waters is very large, and, owing to the imperfect closure of the os by the breech, often projects considerably into the vagina. When the membranes rupture, the amniotic liquid does not come with such force, but it flows away more

slowly, but much more completely than in head presentations. When the breech alone presents, the finger first encounters a soft, rounded mass, upon some portion of whose anterior surface is a hard resistant portion, the great trochanter of the femur. Carrying the finger upwards and backwards, we reach the fissure between the nates, and may recognize the tip of the coccyx and the sacrum. Then the anus, and, in boys, the scrotum. The tip of the coccyx points to the side opposite to that to which the back points. The pressure of the uterus on the breech frequently occasions an evacuation of meconium. The possibility of confounding presentations of the face and of the breech has been mentioned.

It may be necessary in some cases to distinguish the knee from the elbow. The knee has two prominences with a hollow between them, while the elbow has but one sharp prominence. Then the larger size of the knee and of the attached limbs would serve to distinguish.

The foot and the hand are easily distinguished. The toes are arranged in the same line, and are shorter than the fingers and less movable. Then, again, the internal border of the foot is much thicker than the external, while the two margins of the hand are nearly of the same thickness. If you cannot distinguish in any other way, bring down the presenting part.

V. DIAGNOSIS OF SO-CALLED TRANSVERSE OR OBLIQUE PRESENTATIONS.

The form of the abdomen is very irregular and the transverse diameter of the uterus is seen to be greater than the longitudinal. By palpation, the head may be detected in one or other iliac fossa, generally the left. Through the vagina we may detect the presenting part, which is very high. When the shoulder presents, the finger first detects the rounded tumor formed by the summit of the shoulder, upon which is the acromion. The clavicle and spine of the scapula can also be recognized.

When the elbow presents it will be recognized by the olecranon and the two condyles, the transverse concavity at the bend of the elbow, and by the vicinity of the chest and the intercostal spaces.

Materia Medica.

Two Cases of Phlebitis Cured by Vipera.

FROM A LECTURE BY PROF. ALLEN.

Reported Phonographically.

I WANT to tell you of two cases, one acute, and one chronic, of inflammation of the veins, phlebitis occurring in men, and cured by a new remedy. The first was that in a man, a worker in gold, always doing most of his work with his right hand. He found that the veins of his right arm were becoming distended, and he worked with increasing difficulty. The work became painful to him on account of the pressure of blood in his arm.

After awhile he could no longer let his arm hang down. The arm was swollen and became purple, and had a *feeling of fullness to bursting*. He had to give up his work and went about with his arm in a sling. The veins seemed to have lost their elasticity. The man had been treated by a great many physicians without any benefit. Electricity had been applied without benefit.

He had the Homœopathic remedies usually prescribed for such cases. The only symptom that he complained of, was a feeling of fullness to bursting, on letting the arm hang down. There was but one remedy in the *Materia Medica*, which had this symptom, and that was *Vipera*.

I do not know whether *Vipera* had ever been prescribed, I think not; but cases of poisoning, which had been reported, gave this symptom, viz.: "the veins would swell in the extremities and the recumbent position was painful." So we gave him *Vipera*, and the case was cured in a few weeks. He took *Vipera* in the seventh (7th) dilution, three times a day, and he has been at work three years. He was absolutely cured. The veins went down in size, and there was no more fullness.

Well, I filed that away. One day there came to me a young man of one of my families, who complained of a swelling in the feet. He had taken a tour in Switzerland, and he could not walk because he could stand but a few minutes. He had to take off his shoe and sit all day long. On examining his foot I found that the swelling commenced at the inner maleolus; at that point there was an enlarged vein, which extended almost to the knee, where it suddenly ceased. At this point there was a hard swelling much like a varicose vein, but hard and blue. All along this line there was great tenderness, and extending out on each side, the leg was red, swollen, almost erysipelatous, and we put on pressure. Here was a case of acute phlebitis. The swelling of the foot was dependent entirely upon the swelling of those veins. If the foot hung down, the veins would become enormously swollen and rapidly increase in size.

First, I prescribed pulsatilla, without relief. I prescribed for three weeks, different remedies, æsculus, arnica (?) and zinc, without any good effect. I bothered over that a good deal, because the patient was obliged to keep away from business and it worried me. One day he happened to say: "If I walk a great deal it feels as if my veins would burst." I said to myself "perhaps vipera will do him good." I prescribed the 7th potency and told him to take it once in four hours.

In three days I received a note from him saying "he was obliged to go down town; as for his leg, he was perfectly cured." At first it was greatly aggravated, and in three days he was entirely cured. I could hardly believe it, the cure was so complete, rapid and perfect.

There are two cases, one of acute and one of chronic phlebitis, cured by this drug. You may confidently expect to cure cases, which others fail to cure by stockings, with the proper remedy. I remember one case of varicose veins, with ulcers, in a butcher. He had all the pulsatilla symptom of indigestion. I prescribed in this and he got absolutely well, the veins were reduced, and he was completely cured. I think in six or eight months he was able to go about without his stocking.

Paedology.

Prodromi.

A. W. PALMER, M. D.

IT is very desirable to impress upon the mind of the practitioner the importance of studying most thoroughly and bearing in mind the symptoms of the prodromal stage of the several diseases. And I am sorry to admit that we homœopaths stand in greater need of this precaution than our old-school brethren, probably for the following reasons: because we spend our time mostly in studying the therapeutics and cure of disease, and the extension of our rich, more potent, but still incomplete *Materia Medica*; also because they are compelled to recognize their inability to cure a number of diseases, after the first stage has passed. This precaution is especially necessary in treatment of children's diseases; because, as all recognize in this department, the difficulty of interpreting the delicate signs which are usually those of the incubative stage. Then again we should always remember the grouping of symptoms of the more common or less dangerous troubles which may forebode a malignant disease.

Take, for instance, the following: "You are called to see a child who is feverish, restless, taciturn, occasionally vomits, and is constipated; you may hurriedly diagnose and treat this for indigestion. But of what serious malady may this be the antecedent? We question the mother about the previous week or ten days. She says the child has been languid, rubbed its forehead frequently, rubbed or pulled at its ears, or pushed and thrown its head against her chest (the last three manœuvres indicating headache). These actions, if the mother or attendant is not very observant, would be overlooked unless interrogated concerning them by the physician, especially if occurring during the period of dentition. It may be a case of meningitis. Then should we follow strictly the valuable advice given by Dr J. L. Smith, in his 'Treatise on Diseases of Infancy and Childhood.'"

"In order to avoid error in diagnosis in the premonitory or initial stage of meningitis, the physician should take time to observe the physiognomy, and note every symptom. More than one protracted visit is often required to remove doubt as to the exact pathological state." Personally, I think it necessary to see the case twice within the first twenty hours before you can be sure.

While speaking of diseases of brain or nervous system, I wish to mention the most prominent precursory signs of idiopathic eclampsia. These are, a drowsy but fretful mood, twitching, restlessness and crying in sleep, and very frequently is noticed a prolonged, vacant staring at some near object.

The following, which has been of much service to me in typhoid cases, is a quotation from the discussion of Dr. R. McMurray, on a paper entitled 'Typhoid Fever,' read before the Homœopathic County Society:

"You need not wait till the characteristic rise and fall of temperature appears to make your diagnosis. You may usually depend upon the *insidious mode* of its incursion, as sufficiently diagnostic to pronounce it and treat it as typhoid fever. No other fever is as *insidious*."

At first I was rather loath to make a decision from such seemingly poor foundation, and have until lately withheld an expressed decision, although in almost every case I have been able to prognosticate in my own mind a typhoid case from merely the insidious onset.

Another symptom, apparently harmless, yet with its peculiar periodicity, is to be dreaded as an almost constant forerunner of membranous croup—that is a slow, wave-like increasing aphonia, with its exacerbations in the evening and ameliorations in the morning.

Again, let us take a sample case. We find a child with fever, peevish, it does not take nourishment, although seemingly hungry, for it attempts to nurse or eat; but as soon as food is ingested, it shows signs of pain and cannot be coaxed to take more. At once the different varieties of stomatitis are suggested to our mind. On examining the buccal mucous membrane it is found hyperæmic, but there are no aphthous

patches nor ulcerated spots. A simple stomatitis seldom interferes with a child eating, except of crackers, toast and such character of foods. We should extend our investigation further and examine the pharynx. If the pharyngeal mucous membrane or the tonsils are œdematous and shiny or glazed, beware of diphtheria, especially if there are any cases in the vicinity, or the patient has poor hygienic surroundings. It is not prudent to make a diagnosis on such meagre indications, but merely watch the pharynx carefully.

On closing allow me to call your attention to what I have frequently noticed to be the usual succession of symptoms, when diphtheretic inflammation extends from the pharynx into the larynx. The tonsils assume a conical form, with the apex a little below the centre, and upon this apex a small patch of exudate, about two lines in diameter, obstinately remains for two or three days, while all other symptoms are constantly improving, until the croupy cough and dyspnœa make their appearance. On careful examination we find that this spread of the membrane is not by contiguity, as the mucous membrane between the apex of the tonsils and the interior of the larynx is perfectly clean but hyperæmic.

Azoospermia; its Relation to Male Sterility.

BY ALBERT ABRAMS, M.D., SAN FRANCISCO, CAL.

Read to the San Francisco County Medical Society.

OUR knowledge of the *potentia generandi* in man is comparatively a recent acquisition to medical literature. The microscopic examination of the semen, coupled with a better understanding of those conditions conducing to male sterility renders the theory no longer tenable that satiated sexual intercourse in man indicates power of procreation. The woman has heretofore borne all blame attached to *sterilitas matrimonii*. Subjected in consequence to many operative procedures by the gynæcologist without securing relief, she has, notwithstanding,

contributed largely to the literature on experimental gynæcology. The inconsiderate attention accorded to this subject in our medical text-books, suggests a succinct review of the literature on male sterility, much of which is culled from German publications.

A case illustrative of this affection is the following: G. J., æt. thirty-seven, consulted me for the following purpose: He has been married ten years. His wife, he avers, "has never known a day's sickness." Their conjugal felicity has been marred in one respect only, viz.: Their inability to beget an offspring. His wife had consulted many leading gynæcologists of Europe, all of whom considered her entirely normal with regard to conception, and attributed the matrimonial sterility to the husband, who was not with her on the continent. Desirous of learning how far he was responsible for her failure to conceive, he submitted himself to me for examination. About twelve years ago, patient had specific urethritis and epididymitis which readily yielded to treatment. The impressions with regard to coition are in no wise abnormal. On inspection of the generative organs, nothing abnormal is revealed, other than the slight bilateral testicular atrophy and non-sensitiveness of the testes on palpitation. The introduction of the urethral sound encounters no resistance, but shows a slight hyperesthesia of the prostatic urethra. Failing to discover any palpable cause for sterility by the means already described, I enjoined him to have intercourse with a condom. The secretion thus obtained was usually fluid, slightly turbid and absolutely destitute of spermatozoa, as determined by the microscope. The only clue offered to symptomatic treatment was the prostatic hyperesthesia, which was combated in the conventional manner. A subsequent microscopical examination of the semen served but to confirm the diagnosis made at the primary examination, viz.: That my patient had *azoospermia*. Here was a clinical history tallying in the main with other reported cases of a like affection. My patient's difficulty lay in the loss of sexual power, which was intact (*potentia ceundi*), but the reproductive power of the semen (*potentia generandi*) was at fault.

Azoospermia must not be confounded with an almost analogous condition likewise resulting at times in male sterility. This condition has been termed *aspermatisim*, signifying a more or less production of semen, its ejaculation, however, during coitus, being prevented. The causes leading to this condition may be briefly summed up as follows:

(1) Absolute aspermatisim; the result of a mechanical impediment for the passage of semen into the urethra.

(2) Relative; the ejaculation of seminal fluid at a time other than during coitus.

(3) Temporary; when ejaculation fails under certain circumstances, depending either upon the position during coitus, or on the woman with whom it is attempted.

(4) Onanism; occurring in those who have practised masturbation, and in whom the irritation caused by the frictions of the natural intercourse is not able to induce an ejaculation.

(5) Paralytic; when the muscular apparatus concerned in the propulsion of semen from the urethra is at fault.

I feel justified in subjoining this latter form, which I have called the paralytic, having met with one case which could only appropriately be consigned to this new division. The case referred to was a young man, who, after intercourse, would discharge, in urinating, a large quantity of semen. Coitus attempted with a condom, left the latter perfectly dry, although after the act, pressure along the urethral canal would always bring to view a variable amount of semen. The amount forced out at one time by my patient was estimated to be equal to two teaspoonsful. When we remember that 10 to 15 grammes constitutes the mean amount of semen ejaculated by a healthy man during coitus, it is not difficult to understand how, in a case of paralytic aspermatisim, this amount of fluid can be retained by a healthy urethra without any great inconvenience. The distensibility of a normal male urethra is very great. I have often been surprised at the large quantity of fluid that can be accommodated by the urethra after practising forced injections with the Davidson's syringe, in protracted cases of urethritis.

In cases of paralytic aspermatism the seminal fluid thrown into the urethra is notably diminished in amount; and in the brief period of time allotted to the sexual act, little or no semen may appear at the urinary meatus, thus constituting a probable cause for male sterility. Many of us, no doubt, have met with cases where patients complain that the ejaculatory act is in no wise pleasurable, or that undue time is consumed in ejaculation, or even, that when semen does pass the meatus, it does so not spasmodically, but in drops. These may be considered but forms approaching paralytic aspermatism. To better understand the conditions operating to produce the paralytic form of aspermatism, let us briefly review the mechanism concerned in producing erection of the male organ and ejaculation of the semen.

Under the influence of the *nervi erigentes*, the muscular fibres of the corpora cavernosa become relaxed, allowing in consequence an increased supply of blood to the compartments of this spongy tissue. From the spongy tissues of the penis, veins return, many of which terminate in the dorsal vein of the organ. Now, in order that the hypervascularity of the male organ be not temporary, owing to the immediate return of the blood to the general circulation, provision is made for this by the presence of the *bulbo-cavernosus* muscle. This muscle begins posteriorly by a tendinous attachment in conjunction with the musculi transversus perinei and sphincter ani externus. The muscular fibres of the bulbo-cavernosus are distributed on either side in a penniform manner, terminating dichotomously above in an aponeurosis, which becomes fused on the dorsum of the penis with the tendons of the musculi ischio-cavernosi. When this muscular apparatus contracts it must constrict the penis in the region of the symphysis, thus preventing the return of blood from the penis. At the same time the male organ, by the action of the musculi ischio-cavernosi, is elevated. Normally, ejaculation of the seminal fluid occurs only in complete erection of the penis. Simultaneously with the swelling of the corpora cavernosa there is likewise a swelling of the

caput gallinaginis, which, as is known, consists of erectile tissue. In consequence of the swelling of this latter structure, the openings of the ejaculatory ducts are directed toward the membranous part of the urethra. It likewise subserves the purpose of preventing any communication with the urinary bladder posterior to itself. That the caput gallinaginis completely bars any communication of the bladder with the urethra, is evidenced from the fact that during complete erection of the male organ urination is difficult, if not impossible. It has been furthermore observed that in those patients who have stricture of the urethra, considerable pain is often experienced during coitus at the period of ejaculation. This is explained by the fact, that the accumulating semen has no point of egress, either anteriorly or posteriorly; in the former instance due to the presence of the stricture, in the latter to the swollen caput gallinaginis. At that period of coition when ejaculation begins, a spasmodic though voluptuous sensation is felt in the perineum, followed by the discharge of semen through the ejaculatory ducts. The semen now pouring slowly into the urethra seeks the point of least resistance. It cannot pass into the bladder, for there the caput gallinaginis stands guard; it must pass forward, and accumulates in a physiological excavation called the bulbous urethra. Here the semen accumulates until a sufficiently large amount induces a reflex contraction of the bulbo-cavernosus muscle, and the semen shoots out of the urethra. In instances of paralytic aspermatism the semen fails to be thrown from the urethral canal, owing either to a reduction in the reflex irritability or strength of the muscle concerned in its expulsion. In the majority of instances, however, an insufficient action of the muscle may be assumed.

If we faradise in a healthy individual the perineum, with one pole in the rectum, the other on the perineal raphe, we feel with a moderately strong current that the pole on the raphe of the perineum is spasmodically thrown forward owing to the contraction of the perineal muscles. The farado-muscular contractility, as determined in

this way, is an excellent means of ascertaining the power of the muscles concerned in the erection of the male organ and ejaculation. In my case of paralytic aspermatism faradization of the perineal muscles was not responded to with that alacrity which characterizes normal muscles. I therefore assume, that the failure to expel the semen was due to a paresis of the bulbo-cavernosus muscle. Prolonged faradization of the perineum after a course of time succeeded fully in restoring my patient to a state of health. A permanent form of aspermatism has been described occurring as a congenital condition. Individuals affected in this way have never been able to discharge semen, whether during coition or masturbation. The cause of such a condition has been hypothetically assumed to be due to a non-irritability of the ejaculatory centre.

Having briefly considered aspermatism with a view of avoiding its being confounded with azoospermia, we pass over to a consideration of the latter affection. Its frequency can better be appreciated when we refer to the classical literature on the subject by Kehrer, who maintained that one-fourth, if not more, of all cases of matrimonial sterility are traceable back to man. In forty cases of sterility, selected at random by Kehrer, the generative organs of both sexes were examined, together with an examination of the semen. In the forty cases which were of many years' standing, azoospermia was present in fourteen, and impotency in two of the cases. From the material thus collected 35.1 per cent. of sterile marriages are traceable to conception disturbance in man. I distinctly remember a very interesting clinical lecture by Kehrer with regard to azoospermia, in which he affirmed that it is met with in individuals in whom neither the history, examination of the genitals, or even microscopical examination of the semen would lead you to suspect the existence of the affection. Indeed, the history of such individuals with regard to coitus, as far as pleasure and copiousness of discharge are concerned, presents nothing unusual. Kehrer likewise makes the utilitarian observation, in considering the relation that

azoospermia might bear to divorce, that should ever the object of matrimony, aside from any ideal view, be considered in a strictly practical and human sense, having for its object the creation of legitimate children, then an examination of the semen with a view of finding azoospermia will have great medico-legal importance.

The more recent observations of Busch may likewise be referred to, in order to furthermore indicate the frequency of azoospermia. The author carefully examined the semen of one hundred cadavers without selection, and found the spermatozoa absent in 27 per cent. of the cases. The ages of the persons thus examined ranged from sixteen to seventy-four, between which ages a physiological production of semen is usually accepted by authors; although prior to puberty and in very advanced life azoospermia must be reckoned as a physiological condition. A drop of normal semen examined microscopically contains hundreds of spermatozoa. We often meet with a condition approaching azoospermia, termed *oligozoospermia*, signifying a diminution in the number of spermatozoa, which, while not necessarily rendering the patient sterile, often passes into azoospermia, as the etiology of the latter affection will teach.

Semen is the product of a number of glands. The secretions of the testicles, seminal vesicles, prostate, cowpers and muciparous glandules of the urethral mucous membrane, all contribute their quota to this complete substance. The loss of any or all of these secretions is capable of producing male sterility. Let us suppose that the testicular secretion alone be poured into the urethra, then male sterility could result in one of two ways. The testicular secretion is in reality the true fructifying fluid, owing to the spermatozoa which it contains. The spermatozoa in the tests are motionless. One of the main conditions necessary for conception is, that a normal spermatozoa should come into immediate contact with a normal ovum; which necessarily pre-supposes movement on the part of the spermatozoa. The spermatozoa only retain motion when the testicular secretion be-

comes mixed with the secretions of the accessory glands of the urethra. If, then, the latter secretions be deficient or absent, sterility may result.

The secretions of the accessory glands subserve likewise another purpose, that of preparing the urethral canal for the testicular secretion. The urethra from the meatus to the caput gallinaginis performs a double service, that of a genital and urinary canal. Such a canal, therefore, cannot conduct an acid urine and an alkaline semen indiscriminately; if it did, it would do so to the detriment of the latter. In the course of the urethra are physiological excavations which are capable of retaining residual urine. The acidity of this secretion together with the urea which it contains are inimical to the vitality of the spermatozoa. The function then of the secretions of the accessory glands of the urethra by virtue of their alkaline reaction is to neutralize the acidity of the urethral wall. The secretions of the accessory glands appear prior to the testicular secretions, as can be seen at the meatus, when the male organ is in a state of complete erection.

Briefly speaking, any condition which will produce obliteration of the vasa deferentia will cause the disappearance of the testicular secretion. A spermatitis or prostatitis may cause respectively an absence of either the secretion of the seminal vesicles or prostate gland. Other conditions, which we will not consider other than mention, are likewise capable of producing azoospermia, such as conditions depressing the system, atrophy and degenerative changes of the tests, etc.

Perhaps the most frequent cause of azoospermia is gonorrheal epididymitis. Liegois collected eighty-three cases of double gonorrheal epididymitis, and found permanent azoospermia in seventy-five of the cases. Nor has the intensity of the epididymitis, and according to the experience of Ulzmann, any very great influence in the production of the subsequent azoospermia. The very interesting experiments of Kehrer with regard to experimental azoospermia, likewise deserve mention. This author after ligation of the *vas deferens* observed considerable excentric hypertrophy (dilatation and thicken-

ing of the wall) of the peripheral end of the seminal duct and epididymis, together with an accumulation of viscid semen containing immature and broken down spermatozoa. He furthermore observed, that the secretory activity of the testicle still continued, only ceasing entirely after five to nine months. Kehrer concludes, that the condition resulting from ligation is analogous to the atrophy of muscular inactivity, whereas Curling maintains the testicular atrophy to be due to an inflammation, the consequence of retained semen. Brissand observes a difference in the reaction of animals after ligation of the vas deferens, according to whether the operated animal is isolated or allowed to remain in contact with the female animals. In the former instance, the spermatozoa in the epididymis and testicle retained their normal appearance, with complete cessation of the testicular secretion; in the latter instance, dilatation of the ducts of the epididymis together with primary increase and secondary decrease of the testicular secretion resulted.

A very characteristic feature of azoospermic semen is the almost constant presence of spermatic crystals. The more fluid the semen, the more rapidly do the crystals appear. Their chemical constitution is still a matter of mere speculation. Whereas, some believe them to be only albuminoid bodies, others look upon them as crystals of magnesia phosphate or even ammonium magnesian phosphates. The more recent authorities, however, identify them with Charcot's asthma crystals. Furbringer attributes the peculiar odor of semen, the aura seminalis of the ancients, to the presence of the spermadic crystals, and furthermore observes, that the latter are only peculiar to the prostatic secretion; a statement which Ulzmann questions. This much is true, however, that, these crystals are quite diagnostic of azoospermic semen. If we expose on an object glass a drop of semen, there appears only, after two or three days, the formation of the spermatic crystals. If, on the contrary, we expose a drop of azoospermic semen in a like manner, the crystals appear after two or three hours. Here, then, resides the characteristic

difference, viz.: The rapidity of crystalline formation in azoospermic semen. The tardy formation of crystals in normal semen may be accounted for by the fact, that movements on the part of the spermatozoa necessarily retard crystallization, as would likewise occur in any other fluid. Azoospermic semen, devoid of movement, owing to the absence of spermatozoa, facilitates rapid crystallization.

That diseases and changes in form of the spermatozoa are capable of conducing to male sterility we well know and need no longer merit our consideration. In conclusion, let the therapy of azoospermia briefly occupy our attention, from which, however, brilliant results are not to be expected. In oligozoospermia, that condition attended by a diminution in the number of spermatozoa contained in the semen, and which often precedes azoospermia, is dependent either on diminished activity of the tests or stenosis of the vasa deferentia. Operative interference in cases of stenosis of the vasa deferentia is out of the question. It remains for us alone to stimulate the secretory activity of the tests by direct faradization. The application of electricity is not alone capable of increasing the production of spermatozoa, but of semen, which latter dilates by *vis a tergo* action the stenotic vasa deferentia. Azoospermia being usually dependent either on complete atrophy of the tests or obliteration of the vasa deferentia, therapeutical results are usually negative. If the epididymis is thickened, owing to infiltration, attempts with medicines may be made.

In cases of azoospermia occurring in married individuals in whom a desire for progeny is expressed, artificial fecundation, as originally practiced by Marion Sims, suggests itself. True, this theoretically brilliant method has not survived its expectations, but having been practiced largely in cases where the woman was alone to blame, does not necessarily contradict the fact, that in women with healthy uteri and in whom no anomaly suggests failure to conceive, artificial fecundation may yet rank among our many successful operative procedures.

"PROGRESS."

Prof. Smith's Clinic.

IN response to a request from the students, Prof. St. Clair Smith held his first clinic on Saturday the 19th.

T. D.—æt twenty-nine, tinsmith. Four years ago noticed a sharp pain, which he referred to his heart.

Has been growing worse up to the present time, and is now worn, anæmic, walks stooped, climbs stairs with difficulty.

He definitely located the pain at a point in the median line about half way between the xiphoid cartilage and the umbilicus.

On examination no disease of the heart could be found.

Two years ago, after two or three hours of severe pain, he had a hemorrhage of dark blood; he had no cough at the time or with the hemorrhages that have subsequently occurred. Neither has he a family history of pulmonary disease.

He complains of a distress at the seat of irritation, aggravated two hours after eating.

Examination of the stomach revealed no tumor, but when the Professor's hand reached the point to which the patient had referred, he showed signs of distress and placed his hand on his back directly behind the irritated spot.

Soon after the irritation, the patient spit up a clot of dark blood. The diagnosis was that of gastric ulcer.

The Professor said: "I do not think this a case of lung disease, because on examination we find no physical evidences; his family history is good; neither has the hemorrhage, which has recurred quite frequently, at any time been bright red, frothy, or accompanied by cough.

With cancer, the patient could not have lived so long. With ulcer the conditions are altered, the patient's age, occupation and all the symptoms point to that disease.

My experience in the use of kali. bich. would lead me to prescribe a three-grain powder of the 3c three times a day.

PROFESSOR MOFFAT has had a severe illness, and was obliged to omit several lectures.

A Visit to the State Insane Asylum of Middletown, N. Y.

AT the opening of his course of lectures this session, Professor Talcott extended a cordial invitation to the class of '88 to visit the asylum which is under his superintendency. Accordingly, arrangements having been perfected, a portion of the class availed themselves of the opportunity offered, and on the 22d inst., at 9.20 A. M., a train on the N. Y., L. E. & W. R. R. conveyed Messrs. Wiggins, Cummings, Ver Novy, Hamlin, Perrin, Fletcher and Clausen to their destination.

The ride to Middletown was pleasant and delightful. Arriving at the station at 11.26 A. M., and being economical, as all medical students must be, especially Seniors, we decided to walk to the asylum. After a tramp over the snow-covered roads, we reached the asylum at 11.50 A. M., where we were most cordially greeted by Drs. Reed and Arthur. After divesting ourselves of our unnecessary clothing, we were escorted to Professor Talcott's private parlors, where we received a hearty welcome from our genial Professor and his two assistants, Drs. Williamson and Kinney. A pleasant hour was spent in discussing our College, its past, present and its future, and recounting old memories, when dinner was announced. Our walk through the country seemed to have roused the innate desire for food, and we did good justice to the elaborate and very palatable repast set before us. Dinner finished, and allowing the physiological time for digestion, we were escorted through the male pavilion of the asylum, accompanied by Drs. Kinney, Reed and Arthur. We were shown the different sad cases of dementia, both primary and secondary, melancholia and general paresis, and through the kindness of the doctor, Hanlin was permitted to test the jugglery of one of the patients, greatly to the amusement of the rest of us.

One interesting feature, in both pavilions, is the institution of the "Day Room" in each ward. The rooms are arranged with a few beds and chairs, and patients are permitted either to lie in bed or sit down and read periodicals, with

their room made cheerful and pleasant by all surroundings which tend to strengthen them both physically and mentally.

From the male pavilion, we returned to the main asylum, where we were met by Drs. Talcott and Williamson and escorted by them through the female pavilion. This was most interesting to some of the boys, since a number of the patients were young and giddy, which somewhat added to the general enjoyment. Our special attention was called to a novel but most useful part of the institution, namely, the school, which has accommodations for at least twenty (20) males and twenty (20) females, and in which, for one hour each day, the attention and minds of the patients are turned from their own conditions to those elements which are higher and loftier. The patients receive instruction in spelling, writing and the other rudiments of the English language, while especial attention is given to history and geography, and in this manner former instruction is recalled and the patients seize with eagerness that which is taught them now and which strengthens them exceedingly mentally.

Having seen the many sad cases of dementia and mania, suicidal, homicidal or otherwise, we started to pass to the main building, when we were startled by a call, addressed to Wiggins from one of the patients, requesting him thus: "Give my love to the Young Men's Christian Association of New York."

Having passed from the female pavilion we again reached the main building, where our attention was called to the dormitory, which is a room at least eighteen feet high and which accommodates twenty-five patients. We especially admired the frescoing and decorations, which we were told were designed and finished by one of the inmates of the male pavilion, a master mechanic by trade.

Having finished the round of the institution, we put on our coats, and, after bidding adieu, with well-wishes for a "Merry Christmas," to those who so pleasantly entertained us, we started on our homeward trip, very favorably impressed with the treatment which the patients of the only true Homœopathic Institution for the Insane of the State of New York receive.

College Notes.

DR. S. HOPKINS KEEP, class of '66, died on October 25th at his home in Brooklyn.

PROF. MOFFAT is still confined to his house on account of sickness. To cheer him a little '88 sent a handsome bouquet of roses to his residence as a token of the high esteem in which he is held by the class.

PROFESSOR McDOWELL, on entering the room for his physiology lecture, Friday morning, found a large bouquet of roses on his table, with a note expressing the good-will of '90 toward him. He responded feelingly.

In the coming three months each of the Senior class will be obliged to purchase more or less in the line of physicians' supplies. In so doing please remember those firms who contribute to the support of this Journal by their advertisements.

A FEW days ago C. E. Wilcox, '89, disappeared suddenly from College. Upon his return he whispered into the ear of one of his classmates that an event had occurred which could not very well be postponed. Upon further inquiry it was ascertained that he had become the happy father of a bouncing girl, weighing ever so many pounds.

By the time this number of the CHIRONIAN reaches its readers, Christmas Vacation will be over, the long *home* stretch is before us, and the dreadful spectre, *Examination in Anatomy*, will appear to the Juniors, while Seniors apprehend the danger from the *wily Censor*. Three months more of good solid work, and then home again, whether we are among the elected or not.

THE class of '88 convened December 15th to decide by ballot who should take the prominent parts in the commencement exercises, with the following result:

Valedictorian J. F. W. Kastindieck.

To represent the class at the Alumni dinner, E. S. Smith.

Prophet, T. C. Wiggins.

Poet, W. A. Wakely.

ONE of the happiest men in College is Platt, of the Senior class, and those who were present at his wedding on December 20th, don't have to ask the wherefore of this thusness, especially if they happen to be acquainted with his lovely wife, who was, up to the time of her marriage, Miss Kittie Meeker of Bridgeport.

The Episcopal church at the latter place was crowded with the friends of both, to witness the ceremony, and almost as many were present at the reception afterwards. Dr. Kellogg, of Ward's Island, acted as best man, and Messrs. Jacobson and Woodruff were among the ushers. After congratulating the bride and groom, everybody congratulated himself upon his good luck at being present on such an enjoyable occasion, and if there were any who failed to do justice to the ample provision of good things, they escaped observation.

Dr. and Mrs. Platt are housekeeping at 317 East 18th street.

PROF. LOISETTE'S MEMORY DISCOVERY.—Prof. Loiset's new system of memory training, taught by correspondence at 237 Fifth Avenue, New York, seems to supply a general want. He has had two classes at Yale of 200 each, 250 at Meriden, 300 at Norwich, 100 Columbia Law Students, 400 at Wellesley College, and 400 at University of Pennsylvania, etc. Such patronage and the endorsement of such men as Mark Twain, Dr. Buckley, Prof. Wm. R. Harper, of Yale, etc., place the claim of Prof. Loiset upon the highest ground.

Exchanges.

A VISITOR who by chance looks into the library of our College will notice the great number of exchanges which are placed on the long table. It is with pleasure that we acknowledge the receipt of so many medical as well as literary journals. A student who has a short time to spare before lectures, will take up a journal, peruse it, and often find one which is published at the College where he studied before coming to this city. He will find items and incidents described which remind him of his College days at a literary institution. We have

men here from *Brown, Amherst, Harvard, Yale*, etc., who are always glad to hear from their former colleges through the journals.

Among the medical journals the *Hahnemannian Monthly*, the *North American Journal of Homœopathy* and the *New England Medical Gazette*, are principally read. As a proof of this we would mention their dog-eared appearance as shown by the middle of each month, a fact which cannot be construed to their disadvantage.

The *Southern Journal of Homœopathy* is always spicy, its *Pot-pourri* is always to the point, and the homœopathic physicians of the South should stand shoulder to shoulder to support this well written Journal. The *American Homœopathist* has again changed Editors lately, and is always full of good things. The *Homœopathic Recorder* combines business with good reading matter, one of its principal features being the introduction of new remedies. Of the *Medical Institute*, published by the students of the Hahnemann Medical College of Philadelphia, we are not prepared to express an opinion, as only four or five copies have reached us since its first publication several years ago. The general appearance of the last two copies is an improvement upon the former editions and its reading matter is very fair. The *Homœopathic Physician*, also published in Philadelphia, is an exponent of the tenets of that branch of the homœopathic profession which only believe in very high dilutions and would never advocate the use of the hypodermic syringe under any circumstances whatever. Good solid articles appear in this Journal which are often copied by other Medical Journals of high standing. Among the western Journals the *Physicians' and Surgeons' Investigator* takes a prominent part, the *Minnesota Medical Monthly*, although young, is a good paper to read. Chicago is represented by the *Clinique, Medical Investigator, Medical Era* and *Medical Visitor*, a solid phalanx of Journals in which the thoughts and opinions of the prominent men of the profession in the West find expression. The *Medical Advance* sometimes allows stuff to appear between its covers which ought to be relegated to the waste-basket on account of its personal

tendencies. Good articles are written for this Journal which somewhat redeem the reputation of the paper. The *Medical Counselor* has not made its appearance lately, but we hope to see it on our table again. The *Homœopathic Journal of Obstetrics, Gynecology and Pathology* has been promised to us some time ago, but we are sorry to say that only one copy of this excellent Journal has reached us. We hope to see more of it. The *California Homœopath* is the representative of the profession of the Pacific Coast, well edited and has always a good word to say about the Hahnemann Medical College of San Francisco, where several Professors are graduates from our College. Among the medical Journals of the old school, *The Lancet* and *The Epitome* are always in demand. *Progress*, of Louisville, Kentucky, has always good things between its covers, and THE CHIRONIAN took the liberty to copy several articles from it for the benefit of its readers. We cannot omit the following Journals, as in all of them we find articles well worth perusing: *The Journal of Medicine and Surgery, Medical Annals, Atlanta Medical and Surgical Journal, Southern Medical Record, Pacific Record, Health Record, Annals of Gynecology, La Reforma Medica*, from Mexico, *Homœopathic World* of London, England, *Quarterly Bulletin, New York Medical Monthly* and *La Homœopatía* from Lima, Peru.

Among our literary exchanges the *Century* with the *Amherst Literary Monthly* and *Nassau Literary Magazine*, take first place. The *Scientific American* and *Forest and Stream* are always welcome to those students who love real genuine sport, or whose inclinations tend to keep up with new inventions in the scientific world. Space does not admit us to more than mention the following: *Fordham Monthly, New York College Journal, University Quarterly, The Xavier, University, College Mercury*, all of this City. *Fisk Herald, Student Life, Willistonian, Swarthmore Phoenix, Crescent, Critic, Reveille*, of New Haven, Connecticut, *Washington College Journal, Spelman Messenger, Emory Phoenix, De Pauw Monthly, Hamilton College Monthly, Atlantis, Academy Bell, Bates Student, Colby Echo, E. H. S. Record, Latin School Register, Tuftonian, Academy Echo, Arms Student, and many others.*